

**DETERMINATION OF THE NUTRIENT CONTENTS AND
MICROBIOLOGICAL CHANGES OF FRESH AND DRIED SEA
URCHINS' GONADS DURING REFRIGERATED STORAGE**

A. Besler^{1*}, B. Kılınc²

¹⁾ Muğla Sıtkı Koçman University, Faculty of Science,
Dept of Biology, Muğla, Turkey

²⁾ Ege University, Fisheries Faculty,
Fish Processing Techn Dept, İzmir, Turkey

Sea urchins are mostly consumed as a food in the Far East and European countries. In Turkey, in coastal areas, they are consumed as fresh by putting on a lemon juice. However, sea urchins are not a well-known species in Turkey. They contain proteins and lipids and are full of vitamins. The compounds that sea urchins contain are rich and essential for human nutrition. In this study, the samples of sea urchins were collected from the nearshore waters of Güllük coastline in Turkey for determining nutrient contents and microbiological analysis. A total of 100 samples (*Paracentrotus lividus*) were collected in August. They were removed to thermoboxes containing ice in order to maintain a temperature around 6°C and carried within them. The gonads of sea urchins were extracted from their shells. By using selective media, samples were homogenized and isolated for microbiological analysis of fresh gonads. For the analysis of dried samples, fresh gonads were dried at 78°C for 40 minutes by using hot-air drying. Fresh and dried gonads were put into strofoam plates and stretched by the films. All samples were stored at 4°C. These fresh and dried samples were aseptically weighed, homogenized and diluted for bacteriological analysis. For the bacteria identification of these samples; microscopic examination of gram stained cells, catalase, oxidase and biochemical tests were performed. Nutrient content of fresh and dried sea urchins were also investigated. Due to the results obtained by analysis, the goal of the study was to provide a reliable and reachable food additive to the consumers by sea urchins that contain very high nutritional value.

Keywords: Sea urchin, chemical composition, Roe fisheries, *Paracentrotus lividus*

* Corresponding author: abesler@mu.edu.tr